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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/629,785	07/31/2000	Duncan J. Forbes	476-1934	4864

7590 06/01/2004  
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EXAMINER

PHAN, HANH

ART UNIT	PAPER NUMBER
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2633

DATE MAILED: 06/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/629,785

Applicant(s)

FORBES ET AL.

Examiner

Hanh Phan

Art Unit

2633

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 31 July 2000.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3 and 5-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,5-8,10,14,15 and 19 is/are rejected.
- 7) ☒ Claim(s) 9, 11-13, 16-18, 20-22 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

1. This Office Action is responsive to the Amendment filed on 03/15/2004.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3, 5-8, 10, 14, 15 and 19 are rejected under 35 U.S.C. 103(a) as being obvious over Prior Art Fig. 1 in view of Prior Art Fig. 2.

Regarding claims 1, 5, 7 and 8, Prior Art Figure 1 discloses a communications network for connecting a number of nodes (i.e., nodes M, N and O) with a headend (i.e., headend 2a and headend 2b), the network comprising:

two optical networks each carrying a set of channels, each network being arranged to carry its respective set of channels in an opposite direction to that of the other network with respect to the nodes, wherein each network comprises a plurality of filters (i.e., filters 3a, 3b, 3c) serially connected by optical waveguides such that an output port of one of filter is coupled to an input port of another filter and wherein an input for a node is formed by a non-serially connected output ports of respective filters from the optical networks (see Prior Art Fig. 1).

Prior Art Figure 1 differs from claims 1, 5, 7 and 8 in that it fails to teach the filters are periodic interleaving filters. However, Prior Art Fig. 2 teaches the filters are periodic interleaving filters. Therefore, it would have been obvious to one having skill in the art at the time the invention was made to incorporate the filters are periodic interleaving filters as taught by the Prior Art Fig. 2 in the system of Prior Art Fig. 1. One of ordinary skill in the art would have been motivated to do this since the Prior Art Fig. 2 suggests that using such the filters are periodic interleaving filters have advantage of allowing providing low loss routes for wavelengths around the network and these couplers have small dimensions, they are comparatively cheap.

Regarding claim 3, Prior Art Figure 1 further teaches the optical networks are fiber networks .

Regarding claim 6, the combination of Prior Art Figure 1 and Prior Art Fig. 2 teaches that two of the serially connected periodic interleaving filters are co-located.

Regarding claims 10, 15 and 19, the combination of Prior Art Figure 1 and Prior Art Fig. 2 teaches wherein each periodic interleaving filter comprising at least one of the networks is arranged to split channels received at an input of that filter equally between an output to a node associated with that filter and an output to a next periodic interleaving filter in the network.

Regarding claim 14, the combination of Prior Art Figure 1 and Prior Art Fig. 2 teaches wherein it includes adding at least one channel from a node to its network's set of channels by coupling the channel from an output of the node to channels received at a respective input to that filter.

***Allowable Subject Matter***

4. Claims 9, 11-13, 16-18 and 20-22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

5. Applicant's arguments with respect to claims 1, 3 and 5-8 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Phan whose telephone number is (703)306-5840.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan, can be reached on (703)305-4729. The fax phone number for the organization where this application or proceeding is assigned is (703)872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4700.

A handwritten signature in cursive script, appearing to read 'Hanh Phan', is written over a horizontal line.

Hanh Phan

05/28/2004